

### **Remarks**

1. The Examiner's reconsideration of the application is urged in view of the amendments above and the arguments below.

2. Claim Rejections – 35 USC § 112

In the Office Action, page 4, point 4, claims 16-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In this respect, it is further said in the Office Action:

*"Independent claims 16, 23, 25, 31 and 32 all contain the limitations of "avoiding misinterpretation of an image displayed on a matrix display device due to defective cells in the matrix display device", "obtaining information on the presence and the location of the defective cells in said matrix display device" and then contain the limitation "adapting the image content of the defective cells...so as to indicate, emphasize or warn for the presence of said defective cells in a copy of said image".*

3. The examiner concludes:

*"Therefore, if the defective cells are a physical part of the display device, then how can the physical cells be adapted in a copy of said image? The examiner cannot possibly know what the applicant intends to claim by these limitations, however, for the purposes of examination, the examiner will assume that the defective cells do not have to be a physical part of the display but rather just cells that aren't displayed properly on the display."*

In order to avoid any misunderstanding, claims 16, 23, 25, 31 and 32 have been amended by replacing the part of a sentence: "for the presence of said defective cells in a copy of said image" by "for the presence in a copy of said image of pixels corresponding to said defective cells."

By this amendment, it becomes clear that there are, on the one hand, cells as a physical part of a matrix display device and, on the other hand, pixels belonging to a copy of an image. Further, according to the wording of claims 16, 23, 25, 31 and 32, in the copy of an image, displayed by the matrix display device, there may be certain pixels which correspond to defective cells of the matrix display device. It is the intention of the present invention to indicate, emphasize or warn, in a copy of an image displayed by a matrix display device, for the presence of pixels corresponding to defective cells in that matrix display device.

After this amendment it becomes clear that the defective cells are a physical part of the display device and not *"just cells that aren't displayed properly on the display."*

#### 4. Claim Rejections -35 USC § 102

In the Office Action, page 5, point 6, claims 16-19, 22-28 and 31-32 are rejected under 35 U.S.C. § 102(b) as being anticipated by Murakami (US 5,982,946).

Amended claim 16 describes a method for avoiding misinterpretation of an image displayed on a matrix display device due to defective cells in the matrix display device, the method comprising:

- obtaining information on the presence and the location of the defective cells in said matrix display device, and

- on the basis of this information,

- modulating the operation of said matrix display device so as to indicate, emphasize or warn for the presence of said defective cells on the actual display of said image, or adapting the image content of the defective cells or of cells in the neighborhood of the defective pixels so, as to indicate, emphasize or warn for the presence in a copy of said image of pixels corresponding to said defective cells.

Murakami relates to the detection of defective pixels in an image (see Fig. 4, S2 "designate defective pixel" and col. 15, lines 8-20: "The operator, while observing the digital image on the monitor 5, recognizes the defective pixel group

in relation to the values of surrounding pixels, for example"). As already explained above, there is an essential difference between a pixel (an element of an image) and a cell (a physical part of a matrix display device).

Because Murakami is not discussing defective cells, Murakami cannot disclose misinterpretation of an image due to defective cells.

There is also no "obtaining information on the presence and the location of the defective cells in said matrix display device" in Murakami for the following reasons:

as Murakami is not discussing defective cells, Murakami cannot disclose their presence or location either;

in the present invention, by "information on location" is meant precise "geographical" information like row and number on the display device (see the example given in the specification, page 15, line 15: "a location: a row and column number and possibly a subpixel index..."); in Murakami, a defective pixel is detected by a user and designated by means of a mouse and Murakami does not contain any indication of further information on location;

attention is also drawn to independent claim 25, which is an apparatus claim, parallel to the method claim 16; this claim contains the limitation: "an information retrieval device for obtaining information on the presence and the location of the defective cells in said matrix display device"; from this it becomes clear that the information on presence and location is obtained by retrieving specific data from a memory; in Murakami, images are retrieved without any particular presence or location information. Finally, because Murakami is not directed to defective cells, there cannot be any disclosure in Murakami relating to indicating, emphasizing or warning for the presence of defective cells.

Regarding the Response to Arguments on pages 2 and 3 of the Office Action, it is said on page 3: *"First of all, the claims do not disclose a limitation stating that the "particular identification" is independent of the image displayed, as*

*argued by the applicant*". Applicants want to draw the attention to the fact that such a limitation is implicitly present in claim 16. Indeed, if the display device has some defective cells, an image, displayed on this device, will be "defective", independently from the image itself.

Further, regarding the Response to Arguments on pages 2 and 3 of the Office Action, it is said on page 3 that: "*Thus, the user observes the defective pixels of the digital image displayed on the display device, which means that Murakami teaches the claimed limitations*". Applicants agree that in Murakami, "the user observes the defective pixels of the digital image displayed on the display device". However, in the present invention, a user is not observing defective pixels of an image but rather the system obtains information on presence and location of defective cells and warns the user for such defective cells on the actual display of an image or on a copy of this displayed image.

Amended claim 16 is thus not anticipated by Murakami.

Furthermore, because the prior art does not contain any indication or hint of the limitations of claim 16, which are not disclosed in Murakami, claim 16 is also non-obvious over the cited prior art and claim 16 is thus submitted to be allowable

Independent claims 23, 25, 31 and 32 are independent claims containing features the same as the features of claim 16. These claims are thus also submitted to be novel and non-obvious over the prior art and are thus also submitted to be allowable.

New claims 17, 18, 19, 22, 24 and 26-28 11 are all claims dependent on allowable claims; they are thus also submitted to be allowable.

For the sake of completeness:

**regarding claims 17 and 26:**

In the Office Action on page 6 the Examiner states that in Murakami "the information is obtained from data previously stored in a memory device". However, in col. 15, lines 25-27 of Murakami is said: "The evaluation area setter 19 refers to the area size (15x15 dots) stored in the area storage 17...". As is explained in col.13, line 48, the information stored in area storage relates to the

size of an area, not to its location. The limitation of claim 17 is thus not disclosed in Murakami.

**regarding claims 18 and 27:**

In Murakami, a rectangular frame, corresponding to the area frame and centered on the defective pixel, is superposed on the displayed image. This rectangular frame does not contain any information on defective cells and also not on defective pixels but is a frame, the position of which is based on the selection of a pixel by an operator (in principle, the operator could select a normal pixel and the frame would then be positioned round this normal pixel).

**regarding claim 22:**

Col. 13, lines 6-17 of Murakami explains the conversion of an image to a digital image by using a scanner (an image capturing device); the scanned image can contain some defective pixels due to the presence of dirt or dust, adhering to the image. Thus the origin of defective pixels is situated in the scanning process, but this does not mean that information on the presence of defective cells (and also of defective pixels) is obtained by a scanning device.

**5. Claim Rejections 35 USC § 103**

In the Office Action, page 9, point 9, claims 20-21 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami (US 5,982,946) in view of Johnson et al. (US 2004/0164939).

Claims 20-21 and 29-30 are all claims dependent on claims which are submitted to be allowable; the dependent claims are thus also submitted to be allowable.

6. Point 2 on page 2 of the Office Action discusses the fact that in the previous response it was said that in claims 16 and 25 the "copy" alternative was deleted while this alternative was still present in the wording of the claims.

Applicants apologize for this error. Applicants did want to point out that the indefiniteness rejection, raised in Office Action of July 24, 2007 in relation to claim 2 has been met by deleting this claim. This indefiniteness rejection was due to the presence of the "copy" alternative in the independent claim.

7. Given the above, it is submitted that the application is now in condition for allowance, and the Examiner's further and favorable reconsideration in that regard is urged.

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Respectfully submitted,



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